

REMARKS

Applicant thanks the Examiner for acknowledging the allowable subject matter in claims 2, 4, 5, 17, 20, 22, 23, 26-33, 50, 61, 62, 73, 74, 77-81, 118 and 121. Noting that the present application has been pending before the Patent Office for almost 10 years, Applicant elects to take the allowable subject matter in order to obtain coverage for certain embodiments of the invention. Applicant believes the previously presented claims to be patentable and plans to file a continuation application to pursue those claims. However, Applicant has amended the claims without prejudice and consistent with the Examiner's suggestions.

Amendments to the Claims

The Office Action stated that claim 2 would be allowable if presented in independent form. Applicant has amended claim 1 to include all limitations of claim 2 and has cancelled claim 2 and claims 4 and 121 have been amended to depend from claim 1 rather than claim 2. Therefore, claim 1 is now allowable because it is an independent claim that has all of the limitations of previously presented claims 1 and 2.

Claim 16 has been amended to depend from claim 1. Duplicate and/or redundant elements are deleted from claim 16.

Claim 21 has been amended to depend from claim 1. Duplicate and/or redundant elements are deleted from claim 21.

Claim 38 has been amended to depend from claim 1. Duplicate and/or redundant elements are deleted from claim 38.

Claim 51 has been amended to depend from claim 1. Duplicate and/or redundant elements are deleted from claim 51.

Claim 55 has been amended to depend from claim 51. Duplicate and/or redundant elements are deleted from claim 55.

Each of claims 3-5, 12-16, 18-19, 21, 34-35, 38-47, 50-51, 54-58, 63-69 and 118-123 depends directly or indirectly from claim 1 and is allowable for at least the reasons that claim 1 is allowable.

Each of claims 63-69 depends directly or indirectly from claim 21 and is allowable for at least the reasons that claim 21 is allowable.

The Office Action stated that claim 17 would be allowable if presented in independent form. Applicant has amended claim 17 to include all limitations of claims 1 and 5 from which it previously depended. Therefore, independent claim 17 is now allowable because it includes all limitations of previously presented claims 1, 5 and 17.

The Office Action stated that claim 20 would be allowable if presented in independent form. Applicant has amended claim 20 to include all limitations of previously presented claim 1 from which it previously depended. Therefore, independent claim 20 is now allowable because it includes all limitations of previously presented claims 1 and 20.

The Office Action stated that claims 22 and 23, each of which previously depended directly from independent claim 21, would be allowable if presented in independent form. Applicant has amended claims 22 and 23 to independent form and to include all limitations of claim 21. As noted above, claim 21 is amended to depend from claim 1. Therefore, independent claims 22 and 23 are now allowable because they include all limitations of previously presented claims 21.

The Office Action stated that claim 26 would be allowable if presented in independent form. Applicant has amended claim 26 to be an independent claim and to include all limitations of independent claim 25 from which it previously depended. Claim 25 is cancelled and claims 59 and 70 have been amended to depend from claim 26 rather than claim 25. Therefore, claim independent 26 is now allowable because it includes all limitations of previously presented claims 25 and 26.

Claim 71 has been amended from independent form to depend from claim 70, which depends from claim 26. Duplicate and/or redundant elements are deleted from claim 71.

Each of claims 27-33, 59-62, 70-81 and 89-93 depends directly or indirectly from claim 26 and is allowable for at least the reasons that claim 26 is allowable.

Previously withdrawn claims 6-11, 82-88, 94-117 and 119-120 are now cancelled.

The Rejections of the Claims under §102 and §103

Applicant respectfully submits that the rejections of the claims are rendered moot by the amendments described above. Applicant reserves the right to resubmit the previously presented claims in a continuation or divisional application. Applicant also notes that the prior art noted in the Specification describes systems which attempt to increase output in response to noise, and these prior art systems do not teach or suggest the elements of the claimed inventions, and could not reasonably be altered to provide a "more stable system," as suggested at page 13 of the Office Action. Any alteration that could suggest obviousness by, for example, converting it to use negative feedback, would have defeated the purpose of the prior art systems.

Humphrey discloses a similar system to the latterly described AAPA systems. Humphrey merely teaches a system in which an amplifier 20 has a minimum and maximum amount of positive variable gain. As will be appreciated, the minimum gain is needed to allow an output to be heard and the maximum gain prevents distortion. However, Humphrey does not teach both a maximum amount of gain used with limited negative feedback that avoids over-amplification and clipping distortion and that limits the output in the case of runaway positive feedback. Nor does Markevich disclose a limited negative feedback. Markevich uses well-known negative feedback amplifier techniques to provide two amplifier gain values based on two negative feedback paths, one active inside the "clipping range" and one outside (Fig. 3), and does not teach or suggest the use of limited negative feedback within a positive loop system. A combination of Markevich with Humphrey would prevent Humphrey from operating as it was intended to operate.

Other Amendments

Applicant has amended claims 72, 78 and 90 to remove potential ambiguities with regard to antecedents.

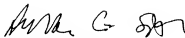
Applicant respectfully submits that the amendments submitted herein introduce no new matter and are supported by the Specification and Drawings. Applicant requests entry of the amendments.

CONCLUSION

All objections and rejections have been addressed and, based on the Examiner's assertion in the Office Action, it is believed that all remaining claims are in condition for allowance. A notice to that effect is earnestly solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is requested to contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
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